

## REMARKS

Reconsideration of the above-identified patent application is respectfully requested. Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,707,039 to Truche et al. (Truche), in view of U.S. Patent Application Publication No. US2002/0120404 A1 to Parker (Parker).

In particular regard to independent claims 1, 7 and 13, the Examiner contends that :

“Truche et al. disclose a method and apparatus of operating a MALDI mass spectrometer, the method comprising the steps of: directing a first laser shot or pulse onto a MALDI sample so as to generate a sample spectrum (Abstract, lines 1-6, col. 2, lines 65-67, col. 3, lines 5-18, col. 13, claim 1, and Fig. 1b), and determining position of a laser to be directed onto the MALDI sample in response to generation of the output signal (col. 3, lines 45-48, col. 6, lines 24-38, and 10z & 10b in Fig. 1B). Their MALDI mass spectrometer (52 in Fig. 1B) comprises: a laser source (Abstract, line 2, col. 3, lines 39-45, and 12a in Fig. 1B), a processing unit electrically coupled to the laser source (50 in Fig. 1B), the processing unit comprising (i) a processor, and (ii) a memory device electrically coupled to the processor, the memory device having stored therein a plurality of instructions which when executed by the processor, causes the processor (col. 3, lines 39-48) to operate the laser source to direct a laser onto a MALDI sample so as to generate a sample spectrum (col. 3, lines 13-15), and determine position of laser to be directed onto the MALDI sample in response to generation of the output signal (col. 6, lines 24-38, cols. 13-14, claims 17 & 32).” (Office Action dated 11/17/2004, page 2-3).

The Examiner concedes, however, that “[w]ith respect to claims 1-18, Truche et al. fail to disclose a method of summing up the signal intensity of the sample spectrum.” (Office Action dated 11/17/2004, page 2, line 5). In addition, the Applicant notes that the Examiner has failed to point to anywhere in Truche wherein the “output signal” is based on analysis of the sample spectrum as recited in claims 1, 7, and 13. In an attempt to overcome these deficiencies in Truche, the Examiner relies on Parker and contends that:

“Parker, however, discloses method of summing up mass signals, in an application of determining mass signals of a bimolecular fragments (para 0078, lines 1-17), which can be used in establishing a predetermined threshold or criteria (2210 in Fig. 3) for further

processing of data.” (Office Action dated 11/17/2004, page 3, lines 6-9).

Accordingly, it appears the Examiner is attempting to combine the device and method of Truche (e.g., “determining position of a laser to be directed onto the MALDI sample in response to generation of the output signal”) with the apparatus and method of Parker (e.g., “determining mass signals of a bimolecular fragments . . . which can be used in establishing a predetermined threshold or criteria”) to arrive at Applicant’s invention. However, Applicant respectfully submits that neither Truche, Parker, nor any combination thereof, render claims 1, 7, and/or 13 obvious.

The rule of law for a finding of obviousness under 35 U.S.C. § 103(a) was reiterated recently by the Court of Appeals for the Federal Circuit as follows, “[w]hen patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness.” *In re Lee*, 277 F.3d 1338 at 1343, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002); See also *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339 at 1351-52, 60 USPQ2d 1001 (Fed. Cir. 2001) (“the central question is whether there is reason to combine [the] references,” a question of fact drawing on the Graham factors). The Federal Circuit expounded upon the necessity of finding some teaching or motivation to combine the references *in the references themselves* concluding that “[t]he factual inquiry whether to combine references must be thorough and searching.” *In re Lee*, 61 U.S.P.Q.2d at 1433 (Fed. Cir. 2002). The teaching or suggestion to make the claimed combination *must be found in the prior art*, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the ~~art~~ <sup>art</sup> would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

In this regard, there is no motivation to combine Truche and Parker. Truche discloses directing an AP-MALDI laser based on an image of the laser beam impinging the target, but fails

to teach or suggest directing the laser based on any other type of data including data based on analysis of a sample spectrum. (See Col. 6, ll. 33-38, Col. 9, ll. 2-8). Parker discloses an apparatus and method for determining the likelihood of the presence or absence of a biomolecule in the sample including comparing those mass signals having a higher intensity than a minimum intensity, but fails to teach or suggest using any type of data, including data based on analysis of a sample spectrum, to direct or otherwise control a laser. (See Paragraphs 0025, 0040). In an apparent attempt to establish a case of obviousness based on these references, the Examiner stated that:

**“It would have been obvious to one having ordinary skill at the time of the invention was made, to combine methods and apparatus of Trouche et al. [sic] and Parker, and add features like, performing a survey scan of a MALDI sample so as to generate plurality of sample spectra and electronic record of it (a well known practice in this art), because Trouche et al. [sic] teach (col. 1, lines 13-14) that mass spectrometry is a powerful analytical tool in identifying molecular components.”** (Office Action dated 11/17/2004, page 3, second paragraph, note emphasis added).

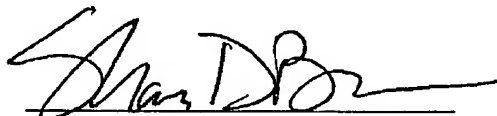
However, this analysis is completely devoid of any legally sufficient teaching, motivation, or suggestion to combine Truche and Parker in the manner proposed by the Examiner. The unsupported, conclusory statement offered by the Examiner as shown in bold above is not a legally sufficient substitution for the factual analysis clarified and confirmed in *Lee*. It is the Examiner's burden to point to such motivation, and the Examiner has not done so. However, if the Examiner sustains such rejection, the Applicant respectfully requests that the Examiner point with particularity to the section of Truche or Parker wherein such motivation is provided.

Furthermore, not only has the Examiner not offered a legally sufficient teaching, motivation, or suggestion to combine Truche and Parker, it is believed that such a combination would not render any of claims 1, 7, or 13 obvious because the combination would fail to arrive at Applicant's invention. Specifically, neither Truche nor Parker teach or suggest “determining position of a second laser shot to be directed onto the MALDI sample in response to generation of the output signal” wherein the output signal is generated from “analyzing the sample spectrum and generating an output signal if the sample spectrum possesses a predetermined criteria” as recited in claim 1 and 7. Additionally, neither Truche nor Parker teach or suggest “directing a

laser focus over the MALDI sample based on the electronic record" wherein the electronic record is generated from "analyzing each of the plurality of sample spectra and generating an electronic record indicative of locations of the MALDI sample which correspond to each of the plurality of sample spectra that possess a predetermined criteria" as recited in claim 13. For at least these reasons, neither Truche, Parker, nor any combination thereof render claims 1, 7, or 13 obvious and, as such, these claims are believed to be allowable. Because claims 1-6, 8-12 and 14-18 depend from claims 1, 7, and 13, respectively, these claims are also believed to be in condition for allowance.

Claims 1-18 are believed to be in condition for allowance, and such action is solicited. It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time sufficient to effect a timely response and shortages in other fees be charged, or any overpayment in fees be credited, to the Account of Barnes & Thornburg, Deposit Account No. 10-0435 with reference to file 32993-72728.

Respectfully submitted,



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